[54]	BI-PLANNER SWIRL COMBUSTOR		4.051.670 10/1977 Pierce
[75]	Inventors:	Ernest C. Faccini, Marbury, Norman J. Saunders, Nanjemoy, both of Md.	4.301.657 11/1981 Penny 60/758 4.351.251 9/1982 Brashears 431/173
[73]	Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.	FOREIGN PATENT DOCUMENTS	
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[21]	Appl. No.:	184.513	[57] ABSTRACT
[22]	Filed:	Sep. 5, 1980	
[51] [52] [58]	Int. CL <sup>3</sup> F23M 3/02; F23D 15/02 U.S. Cl. 431/9; 431/10; 431/158; 431/352; 60/757	A method and apparatus for combustion of fuel wherein in two mutually perpendicular air swirls are used. In the cylindrical section of the combustor, a horizontal swirl with respect to the combustor is set in motion. The conical section in conjunction with the cylindrical section forms a vertical swirl with respect to the combustor. Notably, the combustor is not dependent upon	
[56]	References Cited		
U.S. PATENT DOCUMENTS			orientation in a gravity field.
3,977,186 8/1976 Arvin et al			9 Claims, 5 Drawing Figures

9 Claims, 5 Drawing Figures

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